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The impact of creative problem solving for general education intervention teams on team member's ratings of treatment acceptability.

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ABSTRACT

Many states require or recommend school-based, problem-solving teams in an effort to develop interventions to address student and teacher needs. Often these teams have not been trained in a structured problem-solving process, which is thought to improve the quality of interventions developed by a team. Creative Problem Solving (CPS) is a problem-solving process developed from creativity and cognitive psychology literature and has been found to increase team effectiveness. CPS has been modified for use with school-based, problem-solving teams, which are called General Education Intervention (GEI) teams in the state of Indiana, to assist in developing quality interventions. This modified process is called CPS for GEI teams. School-based problem-solving teams, CPS, and treatment acceptability literature were discussed. The purpose of this study was to examine the impact of training in CPS for GEI teams on team members' ratings of familiarity, acceptability, and perceived effectiveness of interventions.

A self-report instrument, developed from the literature, assessed team members' ratings of familiarity, acceptability, and perceived effectiveness of positive, negative, and consultation intervention types by problem severity. There were 89 participants from 23 elementary schools that completed pre- and posttest surveys in this treatment (CPS-GEI trained) vs. control (untrained) group experimental design. Findings indicated that training in CPS-GEI significantly increases team members' familiarity ratings for all

intervention types measured, acceptability ratings for positive interventions, and perceived effectiveness ratings for consultation interventions. These findings suggest that training school-based, problem-solving teams in a specific process will increase team members' familiarity with interventions. Findings in this study do not support current treatment acceptability models suggesting that familiarity, acceptability, use, integrity, and effectiveness are interrelated and that by changing one variable, others will change as a function of the interrelationship.

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Chapter I

INTRODUCTION

Many states require or recommend school-based, problem-solving teams in an effort to address student and teacher needs (Carter & Sugai, 1989; Wood, Lazzari, Davis, Sugai, & Carter, 1990). The team members work collaboratively to develop viable solutions to difficult situations. More specifically, interventions are developed by the team and the referring teacher in order to promote a positive change in a student's academic or behavioral progress so that students can be maintained in a general education classroom setting. Flugum and Reschly (1994) stated, "High-quality interventions have significant promise for improving the performance of students in regular education classrooms, thereby preventing unnecessary referrals and comprehensive evaluations" (p. 2). Furthermore, there is a need for "improving the quality of interventions through implementation of systematic problem-solving procedures" (p. 12).

Unfortunately, many problem-solving teams have not been trained in a structured process (Welch, Brownell, & Sheridan, 1999), let alone a problem-solving process grounded in research and theory. Creative Problem Solving (CPS) is a problem-solving process developed from creativity and cognitive psychology literature (Isaksen, 2000). The CPS process has been found to be an effective problem-solving

process in corporate and organizational settings, as well as with children, adolescents, and adults in schools (Treffinger, 1995). The Blumberg Center for Interdisciplinary Studies in Special Education CPS Coordinators modified the CPS process to assist school-based, problem-solving teams in developing quality interventions (Buddle, Wolf, Littlejohn, & Bahr, 2001). In selecting and implementing interventions, teams have an abundance of interventions from which to choose. In fact, there are many interventions found to be effective, but research-driven support of effectiveness is not the primary factor in intervention selection and use. Researchers (Reimers, Wacker, & Koeppl, 1987; Witt & Elliott, 1995) have identified several variables as important factors in intervention selection, including familiarity, acceptability, and perceived effectiveness. Currently, there is a need to develop an understanding of school-based, problem-solving team members' views of interventions and the impact of training in Creative Problem Solving on these views.

A review of literature includes research on a) school-based, problem-solving teams, b) Creative Problem Solving, and c) treatment acceptability, familiarity, and perceived effectiveness. The purpose of the current study is discussed.

School-Based Problem-Solving Teams

Schools are using a team approach to meet the needs of students and teachers in the classroom (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999; Welch et al., 1999), as research has identified many benefits of accessing groups rather than relying on individuals to address concerns (Isaksen, 2000). These benefits include greater availability of knowledge and information; building and improving upon other's ideas;

broader range of experiences and perspectives; and increased understanding, acceptance, commitment and ownership. Working in groups has been suggested to be very productive for developing ideas by Osborn (1953):

> For one thing, the power of association is a two-way current. When a panel member spouts an idea, he almost automatically stirs his own imagination toward another idea. At the same time, his ideas stimulate the associative power of all the others. (p. 299)

School-based, problem-solving teams were developed to meet state requirements or recommendations for prereferral interventions (Carter & Sugai, 1989; Wood et al., 1990). In the 1970's, multidisciplinary teams first emerged in response to the processes mandated by The Education for All Handicapped Children Act, Public Law 94-142. Despite that these teams were developed more on intuition rather than research and theory (Rosenfield & Gravois, 1999), school-based, problem-solving teams have continued because research (Chalfant & Pysh, 1989; Hayek, 1987; Wood et al., 1990) has suggested that problems can best be addressed by teams rather than individuals.

Various terms for school-based teams include teacher assistance teams, student assistance teams, intervention assistance teams, child study teams, peer intervention teams, prereferral intervention teams, school consultation committees, instructional consultation teams, instructional support teams, mainstream assistance teams, and general education intervention teams (Bahr et al., 1999). Team functions vary somewhat depending on the stated purpose of the individual team, but in general, problem-solving teams function to: (a) decrease unnecessary referrals for special education assessment; (b) problem-solve difficulties on behalf of students with and without identified disabilities;

(c) develop appropriate educational plans for students with academic, social, or emotional problems; (d) ensure that students receive recommended accommodations in general education settings; (e) monitor student progress; and (f) foster communication among staff and teachers (Friend & Cook, 1997). Despite having different names and varying purposes, generally, problem-solving teams have a common goal of developing interventions to promote change in students' academic or behavioral progress. In the state of Indiana, where this study was conducted, school-based, problem-solving teams have been implemented to meet state requirements for written general education intervention procedures (Indiana Special Education Rules, 1995; Indiana Special Education Rules, 2000). School-based, problem-solving teams will be referred to as General Education Intervention (GEI) teams in this study except when another term is used specifically in the research.

Team effectiveness. Researchers (Chalfant & Pysh, 1989; Hayek, 1987) have found school-based teams to provide an effective support system to facilitate instructional alternatives for teachers to use with students having difficulty in the classroom. For example, Chalfant and Pysh (1989) found that schools using problem-solving teams reported lower referral rates to special education, high teacher satisfaction, and high rates of problem resolution. Wood et al. (1990) cited 1987 statistics from the North Carolina State Department of Public Instruction and U.S. Department of Education suggesting that as a result of the prereferral intervention model, there was a 42% decrease in the number of students tested for special education and a 72% decrease in special programs for children with mild disabilities. Whitten and Dieker (1995) found that teams adequately addressed the needs of 59% of the students brought to the team without referring to

special education. A two-year study of School-Based Intervention Teams (McDougal, Clonan, & Martens, 2000) indicated a 36% decrease in referral rates compared to preimplementation referral rates, and the matched schools with no teams demonstrated a 15% increase in referrals during this same time period.

Research has identified several factors related to team effectiveness. Chalfant and Pysh (1989) reviewed data from 96 teams and found that training and team process are two variables that improve team effectiveness. Other research (Bahr et al., 1999; Kovaleski, Gickling, Morrow, & Swank, 1999) determined that team effectiveness improves with high process fidelity, meaning that teams that have and implement a team process will be more effective. Yet not all teams follow a systematic problem-solving process (Eidle, Truscott, Meyers, & Boyd, 1998). Teams that half-heartedly implement their team process will not be any more effective with student outcomes than schools that do not use teams to address the needs of students who are considered to be at-risk for difficulties (Kovaleski et al., 1999).

It is apparent that a strong, well-outlined, problem-solving process is an important factor for team effectiveness. Yet, many educators participating on school-based problem-solving teams have not received adequate training in a team process and are creating their own process (Welch et al., 1999). As Huebner and Hahn (1990) stated, "teams do not automatically demonstrate greater effectiveness than individuals. Without training in team process skills, some teams are no more effective than individuals" (p. 237; emphasis in the original).

Hayek (1987) conducted a survey of administrators in the state of Georgia and found that 41% indicated a lack of understanding of teams' basic purpose and 54%

responded that in-service training of teams was inadequate. Another study (Whitten & Dieker, 1995) found similar responses from elementary school team members in Illinois. Forty-seven percent indicated that they had not been trained to function effectively as a team. Without training, teams are more likely to be less effective, more poorly used, and more confused as to the purposes and operations (Hayek, 1987). This is supported by the Chalfant and Pysh (1989) study in which 65 % of the teams surveyed indicated that being well-trained in the team process contributed to team effectiveness. These studies suggest that teams trained well in a problem-solving process will be more effective. Poorly organized and untrained teams do not produce the same results. As Rosenfield and Gravois (1999) stated:

> The practitioner interested in school-based teams, pro or con, should recognize the distinction between well-conceived teams and those that have just been thrown together. Indeed, innovations that are haphazardly conceived and implemented are rarely effective, and school-based teams are no different. (p. 1038)

Research on school-based, problem-solving teams has evaluated team and teacher satisfaction, referral rate to special education, and student performance indicators in addition to documenting the importance of having a structured process and the need for training in a process (Rosenfield & Gravois, 1999). Much of this research was conducted by comparing schools with teams to schools without teams and it is believed that participation on a problem-solving team alone may increase teacher's motivation to try more interventions before referring to special education (McDougal et al., 2000). The effectiveness of a specific team process would better be evaluated by comparing schools

with a specific team process to schools that also have teams. As Flugum and Reschly (1994) stated, "research and training are needed on how to apply more broadly the existing knowledge base on systematic problem-solving with prereferral interventions" (p. 13). There are two areas not addressed in the current literature. First, the effectiveness of teams trained in a specific problem-solving process as compared to the effectiveness of teams implementing an unspecified process has not been evaluated. The varied results of team effectiveness discussed earlier may be related to the process implemented. It is important to know if specific problem-solving processes are more effective in helping teams develop and implement interventions. The second void in the research is an understanding of team members' knowledge and acceptance of interventions. With the exception of special education referral rate, few studies have assessed the process or outcome variables of using GEI teams (McDougal et al., 2000). Developing interventions is the primary goal of GEI teams; therefore, the team members' knowledge and views of interventions may play an important role in team effectiveness. Research has pointed to the need for increasing team members' intervention knowledge and skills (Flugum & Reschly, 1994; Whitten & Dieker, 1995; Wood et al., 1990). At the present, we do not have an understanding of how teams view interventions and the effects of training in a team process on these views.

Creative Problem Solving

CPS is a problem-solving process that is able to address unclear or poorly defined problems, provide flexibility in choosing methods or pathways to a solution, and develop outcomes not currently available (Isaksen & Dorval, 1996). By encouraging creativity

with problem-solving, participants go beyond reproducing old, learned responses to a situation and produce new or creatively modified solutions. This latter statement is the key for GEI team members, as referring teachers may have already exhausted their "bag of tricks" when it comes to interventions.

Treffinger (1995) identified CPS to be beneficial on many levels, as CPS: 1) helps planning and development to be a deliberate and systematic process; 2) provides practical strategies that are easy to apply within a group; 3) supports teamwork and consensus-building within groups; 4) promotes a constructive outlook (focuses on what can be done and not what won't work); 5) offers a structured approach, but maintains flexibility in selecting and using strategies or techniques; and 6) respects ownership (helps teams to plan and develop their own solutions).

The CPS process, as it was modified for Creative Problem Solving for General Education Intervention (CPS-GEI) teams, is described briefly below. A complete description of CPS (see Isaksen, 2000 for a comprehensive list of references) and the CPS-GEI process (Buddle et al., 2001) are available. With the exception of another study (McKinney, 2001) conducted in conjunction with this researcher's study, there is no other research available demonstrating the effectiveness of the CPS-GEI process; therefore, research supporting CPS effectiveness will be discussed.

What is CPS for GEI teams? The CPS version developed by the CPS Group-Buffalo (Isaksen, Dorval, & Treffinger, 1994) has been adapted and modified to meet the goals and needs of GEI teams. The modified process is referred to as the CPS-GEI process. Since this study was conducted, the CPS process (Isaksen, Dorval, & Treffinger, 2000) has been updated and the CPS changes have been incorporated into the CPS-GEI

process. However, these changes did not affect this study and the CPS-GEI process that was current at the time of this study will be described below.

The CPS-GEI process encompasses three primary components from CPS: Understanding the Problem, Generating Ideas, and Planning for Action (Isaksen et al., 1994). One component is Understanding the Problem. Prior to the GEI meeting, the referring teacher has completed pre-meeting paperwork to provide most of the information necessary for the team to define the problem. In addition to background information and previously tried interventions, the referring teacher has provided an initial goal statement to the team. A goal statement is a sentence starting with the words "Wouldn't it be nice if...?" and ending with a description of the desired outcome (e.g., "Wouldn't it be nice if the student had passing grades?"). The goal statement emphasizes a positively stated goal instead of focusing on the negative (e.g., "The student is failing all classes.") and is broad enough so that possible solutions are not eliminated by developing too narrow of a statement (Buddle et al., 2001). Next, problem statements are developed based on the desired outcome. A problem statement is a question that can be used to generate many, varied, and novel ideas and is used to help focus the direction for problem solving (Buddle et al., 2001). Problem statements begin with stems such as, "How to...?" or "In what way might...?" (e.g., "How to get the student to turn in homework?"). Problem statements are narrower and more specific goals than goal developed in the goal statement. It is important to note that both goal and problem statements end with a question mark for the propose of inviting a response. As Reif (1980) stated, "Indeed, how a problem is initially described, even before the planning or implementation of a solution, determines crucially how easily the problem can be solved

or whether it can be solved at all" (p. 48). How a problem is defined is just as important as how it is solved; if one does not fully understand the problem, how can relevant solutions be developed?

Another CPS component is Generating Ideas. It is during this component that participants use two types of thinking called generating and focusing to generate, analyze, select, and develop new possibilities (Isaksen & Dorval, 1996). Teams members are initially encouraged to generate, which means they develop as many ideas as possible without evaluating the ideas. There is a positive correlation between the quantity and the quality of interventions, and those individuals trained in CPS generate a significantly greater quantity and quality of ideas as compared to their untrained counterparts (Firestien, 1990; Parnes, 1961; Parnes & Meadow, 1959). After an extensive list is created, the team members are asked to focus, meaning that one or more ideas are selected, evaluated, and pursued further.

Planning for Action, the third component, is where potential solutions are examined, analyzed, and developed so a specific plan can be formulated for implementation. The most promising ideas are selected by the referring teacher to further pursue and refine into effective interventions. The refined interventions are included in an action plan that identifies who is responsible, the date to be implemented, and what level of change will be considered successful (Buddle et al., 2001).

Follow-up, an essential component for effective intervention teams (Aksamit & Rankin, 1993), is built into the process. At the end of the problem-solving session, a follow-up meeting is scheduled to review the action plan (Buddle et al., 2001). The action plan identifies who is responsible to carry out each step by a specified date.

During the follow-up meeting, progress is reported by the referring teacher and noted on the action plan. Modifications or changes in the action plan are made, as needed. This process continues until either positive changes are established and maintained or the appropriate referral is made.

Creative Problem Solving research. Efforts to study the creative process began in the early 1900s. Alex Osborn in 1952 is credited with the first description of CPS from which the current CPS-GEI process was eventually developed. Osborn's CPS process has evolved through research and practice over the past 50 years. Treffinger (2000) best summarized this transformation by stating:

> For more than fifty years many researchers and developers proposed a variety of models for problem-solving by individuals or groups. Those models have been developed, studied, and applied in many settings: colleges and universities, public elementary and secondary schools, small and large businesses, and a variety of consulting organizations. Taken together, those applications and studies comprise the foundations for the premise... that across many places, organizational settings, and people, the Creative Problem Solving framework provides tools that make a difference to individuals, to groups, and to the quality of life. Making a difference in any of these ways requires a framework that has stood the test of scrutiny of inquiry over an extended period of time. It also requires that the framework we use does not remain rigid and static, but continues to be enhanced and extended or informed by research evidence and the lessons of exemplary practice. (p. 35)

A review of CPS and other creativity training literature points to CPS training's effectiveness. Firestien (1988) found that individuals trained in CPS, compared to untrained individuals, demonstrated a significant increase in participation, satisfaction with group interactions, support of ideas, and verbal and nonverbal indications of humor, as well as a decrease in criticism of ideas. In small groups, CPS has been found to reduce communication apprehension (Firestien, 1988; Firestien & McCowan, 1988), which is related to effectiveness in idea production (Comadena, 1984; Jablin & Sussman, 1978).

To address the concerns of training effectiveness for creativity programs, Rose and Lin (1992) used meta-analysis to evaluate previous research. The goal was to determine the average effect sizes of creativity training on overall creativity, verbal creativity, and figural creativity totals, as well as the four creativity components measured by the Torrance Tests of Creative Thinking (1966) (Fluency, Flexibility, Originality, and Elaboration). The researchers concluded that, cumulatively, the creativity training programs have a moderate effect size (ES = .596) and account for 36 percent of the variance for the verbal creativity components. The effect sizes were small for the overall and figural creativity totals. CPS alone accounts for 40 percent of the overall creativity total (ES = .629), 115 percent of the verbal composite total (ES = 1.076), and only 9 percent of the figural composite total (ES = .294). The three verbal components, Fluency, Flexibility, and Originality, had profound effect sizes. This finding suggests that training in creativity was effective, but more importantly, the CPS training was found to be the most effective creativity training program for groups. Further, this supports the notion that CPS increases the quantity of ideas produced with

words (Fluency), the variety of ideas produced with words (Flexibility), and the ability to produce ideas away from the obvious, commonplace, banal or established (Originality). Concerns with using meta-analysis is group comparability and lack of control over design issues. However, Rose & Lin attempted to address these concerns by only including larger, long-term experiments and experiments using the same or similarly adapted measures.

In summary, CPS training has been found to significantly reduce communication apprehension (Firestien, 1988; Firestien & McCowan, 1988), increase participation, increase satisfaction with group interactions, decrease criticism of ideas (Firestien, 1988), and increase creativity (Rose & Lin, 1992). Based on these findings, it is possible that when adapting CPS for GEI teams, team members may experience these same benefits. The modified CPS process is one possible process that can be used with teams. Behavioral consultation and organizational consultation processes have been used with teams, as well (McDougal et al., 2000; Truscott, Cosgrove, Meyers, & Eidle-Barkman, 2000). The CPS-GEI process addresses the needs of GEI teams by providing a designed structure that includes accountability and follow-up in the action plans. While the CPS-GEI process is new, the previously discussed research suggest a reason to implement this process with GEI teams and evaluate the process's impact on outcome variables, such as interventions.

Treatment Acceptability, Familiarity, and Perceived Effectiveness

The primary purpose of GEI teams is to develop successful interventions; therefore, it is important to understand the variables that influence treatment efficacy.

Reimers et al. (1987) identified researched-based intervention effectiveness and treatment acceptability as two basic factors that directly influence the probability of treatment success. Intervention effectiveness has been studied extensively in the past 40 years (Reimers et al., 1987), yet the most effective interventions are not necessarily those that are selected and implemented. It has become apparent that other factors, such as consumer perception of interventions, influence treatment selection and implementation. In an effort to identify the factors considered in treatment selection and implementation, researchers modified their focus to include not only the evaluation of intervention effectiveness but also the social importance of treatments. The focus of this study will pertain to GEI team members' familiarity, acceptability, and perceived effectiveness of interventions.

Treatment acceptability. Wolf (1978) first suggested that social importance, or what he termed social validity, is a measure of the social appropriateness and significance of the goals, procedures, and effects of an intervention. The concept of social validity is assessed by measuring consumer (children, parents, teachers, and others) acceptability of the treatment. Kazdin (1980a) defined treatment acceptability as:

> ...judgments about the treatment procedures by nonprofessionals, lay persons, clients, and other potential consumers of treatment. Judgments of acceptability are likely to embrace evaluation of whether the treatment is appropriate for the problem, whether treatment is fair, reasonable, and intrusive, and whether treatment meets with conventional notions about what treatment should be. (p. 259)

Treatment acceptability is one necessary parameter from which to evaluate interventions because it influences the likelihood of an intervention's being attempted (Shapiro, 1987).

Witt and Elliott (1995) first proposed a model of acceptability identifying a sequential and reciprocal relationship between treatment acceptability, use, integrity, and effectiveness. This model was expanded by Reimers and colleagues (1987) to include understanding of the treatment. This model attempts to explain the complex, though logical relationship between several key variables (i.e., understanding, acceptability, use, integrity, and effectiveness) that, together, promote treatment efficacy. Reimers and associates suggested that a person must first have an understanding of a treatment before it could be found acceptable. Furthermore, a true measure of acceptability can not be obtained if a treatment is not well understood. The relationship between acceptability and understanding of a treatment has been studied extensively (e.g., Clark & Elliott, 1988; McKee as cited in Elliott, Witt, & Kratochwill, 1996; Rasnake, Martin, Tarnowski, & Mulick, 1993; Tingstrom, 1989). Treatment acceptability, in turn, influences a person's choice of intervention selection (e.g., Hall & Didier, 1987; Reimers, Wacker, Cooper, & DeRadd, 1992; Reimers & Wacker, 1988); the greater the acceptability, the higher probability of use and vice versa.

Treatment integrity is the extent to which an intervention is implemented as planned (Gresham, 1989). Reimers and colleagues (1992) studied the use of behavioral interventions by parents and concluded that once parents began implementing the intervention, their acceptability ratings of the intervention increased. Researchers (Elliott, 1986; Reimer et al., 1987) state that the link between use of an intervention and intervention effectiveness is treatment integrity. The more acceptable the intervention,

the greater the likelihood of carrying out the intervention as planned. The greater the treatment integrity, the greater chance of a successful outcome (Yeaton & Sechrest, 1981). Finally, the effectiveness of the intervention will increase the intervention acceptability (e.g., Reimers & Wacker, 1988; Reimers et al., 1992; Spreat & Walsh, 1994; Von Brock & Elliott, 1987). If a consumer judges an intervention to be effective, the consumer may also find it to be more acceptable.

Modification of Reimers' et al. (1987) acceptability model could be applied within the framework of teams. Typically, teams are not necessarily responsible for implementing interventions. Yet, the concepts of understanding the intervention, treatment acceptability, recommended use, and perceived effectiveness apply. Teams must have an understanding or be familiar with an intervention before finding it acceptable. In fact, research (Macmillan, Forness, & Trumbull, 1973; Witt & Elliott, 1982) suggests that teachers will choose interventions with which they are more familiar, regardless of their proven effectiveness. While working on an intervention-focused team, GEI members may become more familiar with certain treatments. If Macmillan and colleagues' and Witt and Elliotts' findings hold true for team members, then acceptability and, therefore recommended use, of interventions would increase. An increase in team members' perceived effectiveness of the recommended interventions would increase treatment acceptability. Effectiveness, in this situation, concerns a constructive difference in performance as perceived by a GEI team member.

Intervention familiarity. As identified in the treatment acceptability model (Reimers et al., 1987; Witt & Elliott, 1995), understanding or familiarity with treatment is the first variable in the equation. Throughout the intervention literature, researchers

(Clark & Elliott, 1988) have called for investigations of consumer knowledge of interventions. Intervention familiarity has been assessed as consumers' general knowledge of behavioral or social learning principles and their understanding of specific interventions (Clark & Elliott, 1988; McKee as cited in Elliott et al., 1996; Rasnake et al., 1993; Tingstrom, 1989). Research (Clark & Elliott, 1988; McKee as cited in Elliott et al., 1996; Rasnake et al., 1993; Tingstrom, 1989) has yielded mixed results concerning the relationship between intervention familiarity and treatment acceptability.

For example, Tingstrom (1989) assessed 73 undergraduate students' acceptability of four interventions. All participants were enrolled in undergraduate psychology courses. The experimental participants attended an educational psychology course where they received approximately five hours of lecture pertaining to general learning principles as well as information about four specific child behavioral interventions. Pretest comparisons indicated no significant difference in acceptability ratings for the two groups. Posttest findings revealed a significant increase in acceptability ratings for the experimental group; the control group demonstrated no change. Although, this study supports the need for consumer knowledge to increase acceptability, its findings do not differentiate between general knowledge of intervention principles and understanding of specific interventions and their relationship with treatment acceptability.

Two studies (McKee as cited in Elliott et al., 1996; Rasnake et al., 1993) assessed participants' level of general intervention knowledge in relation to treatment acceptability and found conflicting results. McKee measured regular education teacher's knowledge of behavioral principles using a Semantic Differential and their intervention acceptability with Kazdin's (1980a) Treatment Evaluation Inventory (TEI). The teachers were

assigned to either low- or high-knowledge groups based on their assessed knowledge. Findings revealed a difference between the two knowledge groups in their treatment acceptability ratings. Specifically, high-knowledge groups rated all interventions as more acceptable than low-knowledge groups.

By contrast, other researchers (Rasnake et al., 1993) studied the relationship between knowledge of behavioral principles and treatment acceptability and found no significant relationship. Rasnake and colleagues assessed treatment acceptability with 57 direct-care staff working in a residential facility with adults identified as severely or profoundly mentally retarded. The staff received on-the-job training for behavioral interventions, although no formal training of behavioral principles had been provided. Each participant completed the 15-item Intervention Rating Profile to assess treatment acceptability and a 25-item multiple forced-choice instrument to measure knowledge of behavioral principles. Unlike McKee's (as cited in Elliott et al., 1996) study, no significant relationship emerged between general knowledge and treatment acceptability for any of the interventions. The authors noted that this population of residential care staff differed from those surveyed in McKee's study with regard to education level. Rasnake and colleagues concluded that knowledge of behavioral principles might not be as important as even limited knowledge of the specific intervention in relation to treatment acceptability.

Other research supports the conclusion that specific intervention knowledge may be more important than general intervention knowledge. Clark and Elliott (1988) measured treatment acceptability, perceived effectiveness, general knowledge of intervention procedures, and specific knowledge of the two interventions studied

(overcorrection and modeling-coaching). Acceptability and effectiveness ratings were assessed using the Behavior Intervention Rating Scale (BIRS) and an informal 10-item test of participants' basic knowledge of interventions. Five of the 10 items assessed specific knowledge about the two interventions studied. A total of 133 participants from one regular education teacher group and two special education teacher groups responded to the survey. Results from the overcorrection intervention group indicated that both basic and specific intervention knowledge moderately correlated with the treatment acceptability and intervention effectiveness ratings. The modeling-coaching correlations were also significant between specific intervention knowledge and treatment acceptability and effectiveness, but only for one of the special education groups. Clark and Elliott's findings indicate that familiarity with specific interventions is related to treatment acceptability as well as with perceived intervention effectiveness.

This review of literature suggests a relationship between teachers' general intervention knowledge and treatment acceptability and perceived effectiveness, but more importantly, it indicates that an understanding of specific interventions is related to treatment acceptability and intervention effectiveness. This finding may be relevant to GEI participants, as an increase in a team member's familiarity of interventions may have a potentially strong impact on treatment acceptability and perceived effectiveness. It seems reasonable that the more familiar team members are with interventions, the greater likelihood of the team recommending those interventions be used.

Perceived effectiveness. As noted earlier, treatment efficacy data are available for many interventions, yet research-driven selection of interventions is the exception rather than the rule. Teachers do not always have access to efficacy data or may not find it

applicable to their specific classroom. Therefore, whether or not a teacher has data supporting the effectiveness of a specific treatment is not nearly as important as whether or not they perceive a treatment to be effective (Witt, 1986). Furthermore, it is necessary to determine if consumer perception of intervention effectiveness and treatment acceptability are the same construct or are, at the least, highly correlated.

Von Brock and Elliott (1987) set out to investigate how treatment effectiveness and acceptability relate to each other, how they influence each other, and how to differentiate between the two. The BIRS was used to assess the acceptability and perceived effectiveness of three interventions (token economy, response cost, and time-out). The participants in this analogue study were 216 experienced, certified teachers attending graduate summer courses. Although factor analysis of the BIRS indicated that acceptability and effectiveness were two distinct constructs, a Pearson's correlation of .79 suggests the two variables are highly correlated. Further analyses indicated that for a child with a mild problem, teachers provided with general information on research-based effectiveness rated a treatment as more acceptable and effective than those participants provided with to effectiveness information. This was not found to be true for a child with a severe problem. The authors concluded that not only is there a strong relationship between treatment acceptability and effectiveness, but that teachers' views on treatment acceptability influence their perceived effectiveness of interventions. This supports the notion that perceptions of treatment acceptability and perceptions of effectiveness can be manipulated by providing treatment effectiveness research, but only for a child with a mild problem. There are two limitations to this study. First, the interventions selected did not vary greatly in acceptability and effectiveness ratings. The authors suggested

including interventions that are considered very unacceptable and ineffective. Second, the participants in this study were all in graduate courses; consequently, the findings concerning research-based effectiveness information may be influenced by the fact that graduate students might place more emphasis on research findings.

Kazdin's (1981) findings were similar to Von Brock and Elliott's (1987) in that efficacy information given to the 112 undergraduate students did not influence acceptability ratings for a severe problem. Kazdin only included a description of a child with severe child problems in vignettes and, therefore, concluded that intervention effectiveness and treatment acceptability are un-related. Moreover, Kazdin used treatments with a narrow range of effectiveness, and this may account for non-significant results.

Reimers and Wacker (1988) collected acceptability and effectiveness ratings of 20 parents prior to and one month after the implementation of treatment. All the parents voluntarily sought behavior management assistance from a university-based hospital clinic for their children whose problems were rated as severe by their parents. Staff psychologists selected a treatment for each parent to implement based on the presenting problem, child history, and clinical interview. After a step-by-step description and rationale of the behavior treatment were provided, each parent completed the15-item Treatment Acceptability Rating Form (TARF) which measured disruption, time, effectiveness, willingness, and acceptability. Parent responses prior to implementing the treatment did not indicate a significant relationship between treatment acceptability and effectiveness, although willingness and disruption were found to influence treatment acceptability. A 1-month post-treatment evaluation indicated a strong correlation ($r =$

.90) between acceptability and effectiveness. A regression analysis of pre and post-treatment implementation data indicated that although willingness and disruption initially had the greatest effect on acceptability, only effectiveness had a significant Beta weight (.887) after implementation. The researchers concluded that parents' effectiveness ratings had the greatest impact on treatment acceptability and that those variables initially influencing acceptability ratings lose their effect once the intervention has been implemented. This increase in treatment acceptability could also be attributed to the fact that the parents were not familiar with different interventions prior to training and implementation. Once familiarity occurs, parents may find an intervention to be more acceptable, but familiarity was not measured in this study.

Expanding this study, Reimers et al. (1992) found similar results supporting the relationship between acceptability and effectiveness. They used two measures of effectiveness and assessed these constructs over an extended period of time. Reimers et al. examined acceptability and effectiveness ratings of 40 parents seeking services at a behavior management outpatient clinic. Using the 20-item Treatment Acceptability Rating Form- Revised (TARF-R) and the Revised Behavior Problem Checklist (RBPC), acceptability, effectiveness, and compliance with treatments were assessed at four times (pretreatment and at 1-, 3-, and 6-month stages following treatment implementation). Results indicated a significant correlation between acceptability and effectiveness at all four assessment points on both measures. Furthermore, results suggested that compliance at 1-month influenced acceptability at 3-months. The latter finding was not true for the 3- and 6-month assessments. To understand the clinical significance of treatment acceptability, parents were divided into low (bottom 33 %) and high (top 33%) treatment

acceptability groups based on their TARF-R scores at 1-,3-, and 6-months. The researchers discovered that parents who rated treatments as more acceptable indicated higher treatment compliance and greater effectiveness ratings at each of the follow-up assessments. Unfortunately, familiarity with interventions was not measured in this study. Thus, researchers can only speculate that familiarity with the interventions may have increased after implementation and, as cited earlier, would increase acceptability.

To further establish the relationship between the perceived effectiveness of an intervention and treatment acceptability, Spreat and Walsh (1994) surveyed 198 professional members of the American Association of Mental Retardation (AAMR), 71% of whom identified themselves as "experienced" in the treatment of severe behavior problems. After reading variations of a vignette for aggressive or self-injurious behaviors of individuals with mental retardation, each participant completed the 9-item Modified Treatment Evaluation Inventory. Eight of these items were used to measure treatment acceptability and one item was used to assess perceived effectiveness. The analysis revealed that though other variables (program restrictiveness, use of past procedures, and severity of behavior) were predictors of treatment acceptability, for both aggression and self-injury the single largest predictor of treatment acceptability was perceived effectiveness. For aggression, 96% of the total explained variation (66%) in treatment acceptability was attributed to perceived effectiveness. Again, of the 67% explained variation in treatment acceptability for self-injury, 88% was accounted for by perceived effectiveness. The authors concluded that the strongest determinant of treatment acceptability among professionals in the field is the likelihood of treatment success.

An individual's perceived effectiveness of an intervention greatly affects their treatment acceptability ratings. As Spreat and Walsh (1994) demonstrated, efficacy data may not be as important as perceived effectiveness. Teachers do not always have access to efficacy data or may not find it applicable to their specific classroom. Therefore, whether or not a teacher has data supporting the effectiveness of a specific treatment is not nearly as important as if they perceive a treatment to be effective (Witt, 1986).

These data support the notion that consumer perception of intervention effectiveness and treatment acceptability are two different constructs and that there is a strong relationship between the two. A relationship between effectiveness and acceptability is suggested, but one is not always dependent on the other. A treatment may be highly effective but not necessarily considered acceptable and vice versa. For example, corporal punishment may be very effective in modifying a child's behavior, yet many teachers do not consider this be an acceptable intervention. Therefore, it important to develop an understanding of both treatment acceptability and effectiveness, especially given that they are two different constructs that are strongly related to each other.

Current Study

One might conclude from the literature that treatment familiarity, acceptability, and perceived effectiveness are interrelated and the manipulation of any one of these variables would influence the others. The strong relationship between these different constructs indicates a necessity to understand each construct in relation to specific consumers and service recipients. This study will address three limitations in the research. First, previous research has assessed treatment familiarity, acceptability, and

perceived effectiveness of preservice teachers, experienced teachers, parents, and professional experienced with regard to adults, children, and students with mental retardation. These constructs have not been measured with GEI team members concerning referred students.

Second, much of the research in the area of treatment acceptability has been conducted in institutional or clinical settings; consequently, the results are not easily generalized to an educational setting (Eckert & Hintze, 2000; Martens, Peterson, Witt, & Cirone, 1986). The present study addresses this limitation by surveying experienced GEI team members in the schools. And third, there is no research in the area of using the CPS process with GEI teams or measuring the effects of training in the CPS-GEI process on treatment familiarity, acceptability, and perceived effectiveness.

The current study is designed to assess GEI team members' ratings of treatment familiarity, acceptability, and perceived effectiveness. Given that problem severity significantly influences treatment acceptability (Eckert & Hintze, 2000; Elliott, Witt, Galvin, & Peterson, 1984; Frentz & Kelley, 1986; Kazdin, 1980a; Martens, Witt, Elliott, & Darveaux, 1985; Reimers et al., 1992; Witt & Robbins, 1985) and intervention effectiveness (Von Brock & Elliott, 1987), the current study examines treatment acceptability and perceived effectiveness relative to mild, moderate, and severe child behavior problems. Three hypotheses were tested in this study for each of the three intervention types included in this study (positive interventions, negative interventions, and consultation interventions).

First, the researcher hypothesizes that for each intervention type, GEI team members trained in CPS-GEI will rate intervention familiarity differently than untrained

GEI team members, and for trained GEI team members, familiarity ratings will differ from pretest to posttest.

Second, the researcher hypothesizes that for each intervention type rated by problem severity, GEI team members trained in CPS-GEI will rate intervention acceptability differently than untrained GEI team members, and for trained GEI team members, acceptability ratings will differ from pretest to posttest.

Third, the researcher hypothesizes that for each intervention type rated by problem severity, GEI team members trained in CPS-GEI will rate perceived intervention effectiveness differently than untrained GEI team members, and for trained GEI team members, perceived effectiveness ratings will differ from pretest to posttest.

Chapter 2

METHOD

Participants

There were 117 GEI team members from 24 elementary schools throughout the state of Indiana that consented to participate in a CPS-GEI project sponsored by the Blumberg Center for Interdisciplinary Studies in Special Education at Indiana State University. Eighty-nine participants from 23 schools completed both pre- and posttest surveys. The 24 schools volunteered to participate by completing an application and participating in a phone interview with the Blumberg Center CPS training coordinators. As the state of Indiana requires (Indiana Special Education Rules, 1995; Indiana Special Education Rules, 2000), each school has written general education intervention procedures. Each school indicated that this requirement is implemented by having a GEI team. None of the schools identified a specific process used by their teams. General descriptions of team processes included referring teacher completing pre-meeting paperwork, discussing student background information at a meeting, "discussing" or "deciding" on interventions or "suggestions," and developing timeline for follow-up meeting. The Blumberg Center staff identified the following criteria for schools to participate in the project: a) a designated GEI meeting time, b) a high level of principal support, c) motivation to change, and d) at least some team members who

will continue with the GEI team for more than one year. These criteria were assessed through self-report on the application and during the phone interview. All schools that applied were accepted.

The demographic data collected from each participant included title, ethnicity, age, gender, degree obtained, years of teaching experience, years on a GEI team, and name of team (see Appendix A). The GEI teams included general education teachers, special education teachers, administrators, and other school staff (school counselor, behavioral consultant, speech pathologist, Title 1 teacher, social worker, teacher's aide, and school psychologist). The schools were randomly assigned to either a treatment (trained) group or control (untrained) group. Group demographics for age, years of teaching, years on GEI team, title, ethnicity, gender, and level of education are shown in Table 1. Chi-square and independent t tests were used to assess group comparability. Findings indicated that a significant difference, $t(87) = -2.07$, $p < .05$, was found between groups for years of teaching experience. No other differences in demographics were found. Results of McKinney's (2001) study that was conducted concurrently with this study indicated no differences between groups in the number of students referred to the GEI team and the rate of referral for special education evaluation. The attrition rate for team members completing pre- and posttest surveys were similar for the treatment (25%) and control (26%) schools. The control schools were given the option of participating in the CPS-GEI training following the completion of this study. In addition, each control school received a $100 stipend by mail for completing the surveys.

Instrument

A 42-item survey was developed for the present study (see Appendix B) after a review of treatment acceptability literature. The content of the survey was reviewed and approved by a doctoral dissertation committee. The survey consisted of three questions assessing participants' familiarity, acceptability, and perceived effectiveness of interventions. Using 5-point Likert-type scales, GEI team members rated their familiarity (not familiar to very familiar), acceptability (not acceptable to very acceptable), and perceived effectiveness (not effective to very effective) of six types of interventions. The six intervention types were previously identified through factor analysis of 2,279 regular and special education teachers' ratings of 34 frequently used interventions in Martens et al. (1986) study of school-based interventions. The six intervention types were labeled Redirection, Manipulation of Material Reward, Alter Classroom Physical Environment, Consultation, Time-Out in Classroom, and Removal from Classroom.

The acceptability and perceived effectiveness of behavioral interventions were rated by problem severity. The six types of behavioral interventions were rated for a child with a mild (i.e., daydreaming; occasional verbal tantrum), moderate (i.e., frequent use of obscene language; arguing with peers; failing less than half of classes) and severe behavior problem (i.e., constantly talks to others during work time; destroys property; failing half of classes). Definitions of severity levels were modified from previous research definitions (Elliott et al., 1984; Grace, Kahng, & Fisher, 1994; Kazdin, 1980b; & Von Brock & Elliott, 1987). Repeated measures analyses of variance were conducted on pretest responses to determine the number of necessary severity levels. The results supported the importance of using the three current severity levels. Pretest surveys

completed by the treatment schools contained a typographical error on the moderate and severe child problem questions for treatment acceptability and perceived effectiveness (see Appendix B). The word "mild" remained where the words "moderate" and "severe" should have been substituted in the question. However, participant responses varied by severity level suggesting that the directions and severity definitions given at the top of each page were read and understood despite the error. Additionally, several participants corrected the error by writing in the correct words. Independent t tests indicated no significant differences in pretest ratings for moderate and severe problem responses between the treatment and control groups, further suggesting that the error did not impact the results.

Given that the instrument used in this study was not the same as the survey in the Martens et al. study, the researcher assessed the structural integrity of the current instrument by performing exploratory factor analysis with the pretest data. The data reduction method, principal components with varimax rotation was conducted with the six intervention types. Results indicated that the consultation intervention type did not load consistently on any factor, and, because the consultation intervention type is conceptually different (indirect vs. direct) from the other intervention types, the analysis was run without the consultation intervention type. A total of seven factor analyses for familiarity, acceptability (for mild, moderate, and severe problems), and perceived effectiveness (for mild, moderate, and severe problems), were conducted by forcing two factors with the remaining five intervention types (see Tables 2, 3, and 4). Results of the analyses supported the need for three intervention types, which were labeled Positive Interventions (Redirection, Manipulation of Material Reward, and Alter Classroom

Physical Environment), Negative Interventions (Time-Out in Classroom and Removal from Classroom), and Consultation Interventions. The interventions included as Positive Interventions are interventions that are easy to use (e.g., verbal redirection) and are focused on increasing a desired behavior (e.g., verbal praise or tangible reward). The interventions that loaded on the Negative Interventions are more reductive and punishing in nature (e.g., time-out for misbehavior). The Consultation Intervention type is different from both the Positive and Negative Interventions in that consultation interventions are indirect and typically require more time from the teacher.

Procedure

Survey. The 24 schools that applied were randomly assigned to either a treatment group or control group. One control school was excluded from the study and the team members did not complete the surveys because the GEI team coordinator was also the team coordinator for a treatment school and had participated in the CPS-GEI training. The GEI coordinators from each school received the pre- and posttest surveys to distribute to the team members. The pretest surveys were mailed in Fall 1999 and the posttest surveys and demographics questionnaire were mailed in Spring 2000. The surveys were accompanied by cover letters explaining the purpose of the survey and confidentiality procedures (see Appendix C). The treatment group brought the completed pretest surveys to a fall training session and the completed posttest surveys to an end-of-the-year meeting. All treatment participants who did not bring a completed survey to training, were given another copy of the survey to be completed prior to the start of the training. The control group returned the completed pretest surveys in postage-paid

envelopes, and the posttest surveys were collected at each school by a CPS-GEI trainer. All identifying information was removed and the surveys were coded prior to being given to the researcher.

Training. The 12 treatment schools attended one of two 6-hour CPS-GEI training days held in Fall 1999. CPS-certified trainers conducted the trainings. The CPS-GEI training consisted of an introduction to CPS concepts and an overview and demonstration of tools, forms, and the CPS-GEI process in the morning and a practice session in the afternoon. Each participant received a folder with training materials including CPS tools and an outline of the CPS-GEI process. A CPS-GEI coach assigned to a school on the training day was available for up to 4 follow-up sessions after the completion of the training. These coaches had previously completed a 5-day CPS training and were trained in the CPS-GEI process. This follow-up support included at least one on-site visit and telephone or e-mail support. Follow-up support was provided to assist with the generalization of the newly learned process to GEI team meetings in home schools and, hopefully, to increase the treatment integrity of the CPS-GEI process.

Chapter 3

RESULTS

Overview of the Analyses

Nine mixed model analyses of variance (ANOVA) were used to investigate familiarity, acceptability, and perceived effectiveness for each of the three intervention types (positive, negative, and consultation) by group and time, and for acceptability and perceived effectiveness, by severity level. To examine familiarity, the researcher used three separate 2 (treatment vs. control) X 2 (pretest vs. posttest) designs with the last factor treated as within subject factor. Acceptability and effectiveness were examined using six separate 2 (treatment vs. control) X 2 (pretest vs. posttest) X 3 (mild vs. moderate vs. severe) ANOVAs with the last two factors treated as within subject factors. This study was most interested in examining the differences between and within groups at pre- and posttest; therefore, this researcher focused upon the interaction effects of group and time, and, for acceptability and perceived effectiveness, level of severity. The main effect analyses were of secondary interest. Where the assumption of homogeneity of covariance was violated, Greenhouse-Geisser adjustments were made. However, the results were not different and the unadjusted results are reported. An alpha level of .05 was used for all statistical analysis with the

exception of the post hoc analyses where the Bonferroni Inequality was used to control for Type I error. Missing data were deleted by analysis.

Familiarity

Three mixed model ANOVAs were conducted to examine differences in GEI team members' ratings of familiarity of three intervention types for group (treatment vs. control) and time (pretest vs. posttest). The means and standard deviations for positive, negative, and consultation intervention types are presented in Table 5 and the ANOVA summaries are shown in Table 6. Findings indicated that there were significant interactions between group and time on team members' familiarity ratings for positive, Pillais Trace = .10, $F(1,87) = 10.05$, $p = .002$, negative, Pillais Trace = .06, $F(1,87) = 5.42$, $p = .022$, and consultation, Pillais Trace = .07, $F(1,87) = 6.12$, $p = .015$, intervention types. Paired and independent t tests using the Bonferroni Inequality with an alpha level of .025 were conducted to determine where the differences lie.

The paired t tests for the positive intervention type indicated that there was a significant difference, $t(51) = -4.14$, $p < .001$, in familiarity ratings for the treatment group at pretest ($M = 4.46$, $SD = .69$) compared to posttest ($M = 4.80$, $SD = .36$). At posttest, the treatment group rated familiarity for positive interventions higher than at pretest. There was not a significant difference from pretest ($M = 4.71$, $SD = .58$) to posttest ($M = 4.67$, $SD = .56$) for the control group. Independent t tests found no differences at pretest ($M = 4.46$, $SD = .69$) and ($M = 4.71$, $SD = .58$) or at posttest ($M = 4.80$, $SD = .36$) and ($M = 4.67$, $SD = .56$) between the treatment and control groups, respectively.

The paired t tests for the negative intervention type indicated that there was a significant difference, $t(51) = -3.07$, $p = .003$, in familiarity ratings for the treatment group at pretest ($M = 4.26$, $SD = .83$) compared to posttest ($M = 4.60$, $SD = .66$). At posttest, the treatment group rated familiarity for negative interventions higher than at pretest. There was not a significant difference from pretest ($M = 4.57$, $SD = .66$) to posttest ($M = 4.54$, $SD = .67$) for the control group. Independent t tests found no differences at pretest ($M = 4.26$, $SD = .83$) and ($M = 4.57$, $SD = .66$) or at posttest ($M = 4.60$, $SD = .66$) and ($M = 4.54$, $SD = .67$) between the treatment and control groups, respectively.

The paired t tests for the consultation intervention type indicated that there was a significant difference, $t(51) = -2.52$, $p = .015$, in familiarity ratings for the treatment group at pretest ($M = 4.52$, $SD = .73$) compared to posttest ($M = 4.79$, $SD = .54$). At posttest, the treatment group rated familiarity for consultation interventions higher than at pretest. There was not a significant difference from pretest ($M = 4.76$, $SD = .60$) to posttest ($M = 4.70$, $SD = .62$) for the control group. Independent t tests found no differences at pretest ($M = 4.52$, $SD = .73$) and ($M = 4.76$, $SD = .60$) or at posttest ($M = 4.79$, $SD = .54$) and ($M = 4.70$, $SD = .62$) between the treatment and control groups, respectively.

Acceptability

Three mixed model ANOVAs were conducted to examine differences in GEI team members' ratings of acceptability of the three intervention types for group (treatment vs. control), time (pretest vs. posttest), and severity level (mild vs. moderate

vs. severe). The means and standard deviations for positive, negative, and consultation intervention types are presented in Table 7 and the ANOVA summaries are shown in Table 8. There were no significant three-way-interactions for any of the intervention types. Findings indicated a significant interaction between group and time on team members' acceptability ratings for positive interventions, Pillais Trace = .17, $F(1,83) = 16.83$, $p < .001$. Paired and independent t tests using the Bonferroni Inequality with an alpha level of .025 were conducted to determine where the differences lie.

The paired t tests for the positive intervention type indicated a significant difference, $t(49) = -4.25$, $p < .001$, in acceptability ratings for the treatment group at pretest ($M = 3.93$, $SD = .74$) compared to posttest ($M = 4.26$, $SD = .61$). At posttest, the treatment group rated acceptability of positive interventions higher than at pretest. There was not a significant difference from pretest ($M = 4.05$, $SD = .73$) to posttest ($M = 3.89$, $SD = .82$) for the control group. Independent t tests found a significant difference, $t(87) = 2.28$, $p = .025$, between the treatment ($M = 4.24$, $SD = .61$) and control ($M = 3.89$, $SD = .83$) groups at posttest, indicating that the treatment group rated acceptability of positive interventions higher than the control group at posttest. No difference between the treatment ($M = 3.93$, $SD = .74$) and control ($M = 4.05$, $SD = .73$) groups was found at pretest.

Perceived Effectiveness

Three mixed model ANOVAs were conducted to examine differences in GEI team members' ratings of perceived effectiveness of the three intervention types for group (treatment vs. control), time (pretest vs. posttest), and severity level (mild vs.

moderate vs. severe). The means and standard deviations for positive, negative, and consultation intervention types are presented in Table 9 and the ANOVA summaries are shown in Table 10. There were no significant three-way-interactions for any of the intervention types. Findings indicated a significant interaction between group and time on team members' perceived effectiveness ratings for consultation, Pillais Trace = .07, $F(1,84) = 6.76$, $p = .011$. Paired and independent t tests using the Bonferroni Inequality with an alpha level of .025 were conducted to determine where the differences lie.

The paired t tests for the consultation intervention type indicated a significant difference, $t(48) = -3.92$, $p < .001$, in perceived effectiveness ratings for the treatment group at pretest ($M = 3.36$, $SD = .73$) compared to posttest ($M = 3.76$, $SD = .81$). At posttest, the treatment group rated perceived effectiveness of consultation interventions higher than at pretest. There was not a significant difference from pretest ($M = 3.38$, $SD = .70$) to posttest ($M = 3.37$, $SD = .70$) for the control group. Independent t tests found a significant difference, $t(85) = 2.34$, $p = .022$, between the treatment ($M = 3.75$, $SD = .80$) and control ($M = 3.37$, $SD = .70$) groups at posttest, indicating that the treatment group rated perceived effectiveness of consultation interventions higher than the control group at posttest. No difference between the treatment ($M = 3.39$, $SD = .75$) and control ($M = 3.38$, $SD = .70$) groups was found at pretest.

Chapter 4

DISCUSSION

The primary purpose of this study was to train GEI team members in the CPS-GEI process and assess team members' ratings of familiarity, acceptability, and perceived effectiveness of positive, negative, and consultation intervention types to determine if training in the CPS-GEI process influenced team members' ratings. Overall, the present findings indicated that training in CPS-GEI influences familiarity rating of interventions and, for some intervention types, acceptability and perceived effectiveness ratings, as well.

Limitations

Prior to discussing these results, it is important to note the limitations of this study. First, the results can only be generalized to school team members resembling those participating in this study (elementary school personnel in the Midwest and state mandated teams). Second, this study uses a self-report measure and, therefore, can not ensure accuracy of responses, a typical limitation of such research. Third, the participating schools were randomly assigned to groups but were not randomly selected (all schools that applied were accepted). Thus, selection bias may impact results. Fourth, despite random assignment, there was a significant difference between groups at pretest

for years of experience. This difference may have impacted the results in some way. However, while the control school had greater experience with a mean of 18 (SD = 9.05) years, the treatment schools were highly experience, as well, with a mean of 14 (SD = 8.98) years. Fifth, by examining only familiarity, acceptability, and perceived effectiveness, this study excludes investigation of other variables that influence acceptability. These variables include the presence of adverse side effects, amount of teacher time and skill required for implementation, effects on other children, treatment integrity, and use (Elliott, 1986; Kazdin 1980a, 1981; Reimers et al., 1992; Reimers et al., 1987; Witt, Elliott, & Martens, 1984; Witt & Martens, 1983; Witt, Martens, & Elliott, 1984). In particular, assessing participants' reported frequency of use would have assisted in the interpretation of the results. Finally, caution is needed in determining if the results are due to training in the CPS-GEI process or if training alone was the influencing variable. The last two limitations will be explored in more detail in the discussion on future research.

Familiarity

The results indicated that GEI team members trained in the CPS-GEI process at the beginning of the school year rated all three intervention types more familiar at the end of the school year. The control group did not rate their familiarity with the interventions significantly different from the beginning of the year compared to the end of the school year. One possible reason for the difference in the treatment group is the actual process learned in the training. The CPS-GEI process emphasizes developing a large quantity of interventions while deferring judgement (Isaksen et al., 1994). Trained team members

may have developed more interventions, therefore, becoming more familiar with a variety of interventions. While there was a significant difference within the trained group, there was not a significant difference between groups at posttest. One possible reason for the difference within the trained group and no difference between groups at posttest could be difference in years of experience between the groups. The less experienced trained group may have rated interventions more familiar because they were less experienced and had more room for growth. However, as mentioned earlier, despite being less experience the untrained group, the trained group had several years of experience.

Acceptability and Perceived Effectiveness

The three-way interactions of Time, Severity, and Group were not significant for any of the acceptability and perceived effectiveness ratings for the intervention types. In looking closer at the results, the ratings by severity level differed consistently without regard to group or time.

For acceptability, when all severity levels were combined, those trained in CPS-GEI rated positive interventions as more acceptable at the beginning of the school year than at the end of the school year. Additionally, the trained group found positive interventions more acceptable than the untrained group at the end of the school year. These findings suggest that the training in the CPS-GEI process significantly affected how acceptable participants view positive interventions. Results for the negative and consultation intervention types indicated that the training in CPS-GEI process did not influence acceptability.

The perceived effectiveness of the consultation intervention type was rated as more effective at the end of the school year than at the beginning of the school year for the CPS-GEI trained group. The trained participants also rated the consultation intervention type more effective than the untrained participants did at the end of the school year. CPS-GEI training did not influence the perceived effectiveness of the positive and negative intervention types.

There are possible reasons for the results for acceptability and perceived effectiveness. In interpreting these findings, it will be helpful to address acceptability and perceived effectiveness results in reference to each intervention type.

Positive interventions. A plausible explanation for trained participants' rating positive interventions more acceptable at the end of the school year is their increased familiarity of positive interventions. At posttest, the trained participants were more familiar with positive interventions. Previous research (Martens et al., 1986; Witt & Elliott, 1982) has shown that positive interventions (e.g., redirection, verbal praise, etc.) are usually preferred over negative interventions (e.g., time-out, suspensions, etc) because these interventions are easier to use and less disruptive to the classroom routine. Additionally, teachers prefer interventions targeting reinforcement of desired behaviors to interventions that punish (Elliott et al., 1984; Elliott et al., 1996; Kratochwill & Stoiber, 2000; Witt, Elliott et al., 1984; Witt & Robbins, 1985). By increasing team members' familiarity of positive interventions, their rating of acceptability may have increased because of the nature of the intervention. Therefore, due to a combination of becoming more familiar and the nature of the interventions, the overall acceptability ratings increased for positive interventions. However, some interventions that are well accepted

are not always found to be the most effective. For example, verbal praise may be a quick intervention that a teacher could feel good about implementing, but this may not be effective for some problems. These explanations may account for an increase in acceptability ratings of positive interventions and no increase in perceived effectiveness ratings for positive interventions.

Negative interventions. CPS-GEI trained group also rated Negative interventions as more familiar at the end of the school year than at the beginning of the school year. However, this intervention type was not found to be more acceptable or effective. One reason for this finding may be that negative interventions are not as well accepted as positive interventions (Elliott et al., 1984; Elliott et al., 1996; Kratochwill & Stoiber, 2000; Martens et al., 1986; Witt & Elliott, 1982; Witt, Elliott et al., 1984; Witt & Robbins, 1985). For example, teachers do not generally prefer to put children in time-out or suspend. Despite becoming more familiar with negative interventions, team members may not find them more acceptable.

Consultation interventions. The consultation intervention type was found to be more effective after training in the CPS-GEI process but not more acceptable. The trained team members reported increased familiarity. It is possible that as the team members became more familiar with the consultation interventions that they found them to be more effective. However, consultation interventions typically require more time and are not as easy to use as some other interventions (e.g., verbal redirection or time-out). Therefore, despite being more effective, team members' acceptability of consultation interventions may not have changed because of the time needed to implement. Time and ease of use are two variables known to influence the treatment

acceptability of interventions and, in particular, consultation interventions (Elliott et al., 1996; Martens et al., 1986; Witt, Elliott et al., 1984).

Implications

This study has helped address a void in treatment acceptability research. This is the first study to measure GEI team members' familiarity, acceptability, and perceived effectiveness of interventions. There have been very few studies assessing treatment acceptability with GEI teams in general and those studies have looked at referral rate to special education and/or acceptability of the GEI process (McDougal et al., 2000). Additionally, this study of treatment acceptability was conducted in the schools and not in a clinical setting. Furthermore, this study addresses the effects of training in the CPS-GEI process on GEI team members.

The primary implication for practitioners in the schools is the importance of training team members in a process. Although no specific training in interventions was provided, team members trained in the CPS-GEI process increased their familiarity with the different intervention types. One could conclude that either the quantity or quality of interventions discussed in team meetings changed as a function of training in the CPS-GEI process. A main objective of most GEI teams is to discuss a variety of interventions to be individualized for a child's needs, therefore increasing team members' familiarity would be a beneficial goal.

From the research standpoint, this study confirms that training is beneficial to GEI teams (Bahr et al., 1999; Chalfant & Pysh, 1989; Hayek, 1987; Huebner & Hahn, 1990; Kovaleski et al., 1999) but is specific in identifying that training in the CPS-GEI process

increases familiarity with interventions. This study suggests that although some interventions are found to be more acceptable, the interventions may not be perceived as more effective and vice versa. Findings in this study do not support current treatment acceptability models (Witt & Elliott, 1995; Reimers et al., 1987) suggesting that familiarity, acceptability, use, integrity, and effectiveness are interrelated and that by increasing one variable, others will increase as a function of the interrelationship. Findings indicate that training in the CPS-GEI process increased team members' familiarity but no consistent increases in acceptability and perceived effectiveness were found across intervention types. Perhaps more consistent increases in acceptability and perceived effectiveness ratings would be found in time (follow-up measures), and assessing use and/or integrity may assist in interpreting perceived effectiveness results. It is important to note that Witt & Elliott's (1995) and Reimers and colleagues' (1987) treatment acceptability models were developed in reference to individuals, not individuals on teams that are indirectly using interventions. There are two modifications to the current models that might more accurately capture treatment acceptability for GEI teams. First, the variable use should be changed to recommended use, as GEI team members recommend interventions and are not usually involved in the direct use of the interventions. The second modification would be the need to assess the referring teacher's perceptions of the intervention. A GEI team member's acceptability and perceived effectiveness ratings of interventions may be directly related to the referring teacher's satisfaction with and perceptions of the recommended interventions.

Future Research

There are several possibilities for next steps in the area of treatment acceptability research with GEI teams. This study did not measure reported use of interventions. Future research should include team members' reported use or actual use (assessed by reviewing action plans). Use of intervention would be an important variable with which to compare team members' familiarity, acceptability, and perceived effectiveness ratings. As indicated in the review of literature, there is a reciprocal relationship between the variables of familiarity, use, treatment integrity, acceptability, and perceived effectiveness (Witt & Elliott, 1995; Reimers et al., 1987). For example, the results of this study indicated that with training in CPS-GEI process, team members reported increased familiarity with all intervention types. The literature suggests that familiarity influences use (Macmillan et al., 1973; Witt & Elliott, 1982), or in the case of GEI teams, recommended use. This variable was not measured, therefore, it is difficult to ascertain if familiarity, acceptability, and perceived effectiveness ratings did or did not change as a function of use of the interventions. The recommended use of interventions could easily be assessed if teams implemented a systematic plan to document and retain GEI team student records including actions plans and follow-up information.

One unanswered question pertains to whether the results obtained were due to the specific CPS-GEI process or training in general. For example, GEI teams are responsible for developing interventions that would require them to be knowledgeable or familiar with a variety of interventions. Perhaps training and follow-up support increased participants' confidence as respective team members, which also increased their confidence in their familiarity with interventions. Future research should attempt

to address this issue by including another treatment group trained in a different GEI process, such as the behavioral consultation model. Results from a study of this nature would help distinguish between the influence of training alone versus training in the CPS-GEI process.

Additionally, measuring team members' confidence in using the CPS-GEI process will demonstrate how confidence in team process affects perceptions of interventions. Team members who were uncomfortable with the process may, in turn, view the interventions negatively.

Future trainings in CPS-GEI could include training in specific interventions that might be recommended by the team. Although intervention training would logically increase team members' familiarity with different interventions, training may increase the integrity with which the interventions are implemented (Kratochwill & Stoiber, 2000). Team members would then be able to report more accurately their acceptability and perceived effectiveness of interventions (Bahr, 1994).

To assist in determining team effectiveness of the CPS-GEI process, ratings of acceptability and perceived effectiveness of the interventions by the referring teacher might add some insight. The referring teachers are the consumers of the GEI teams; therefore, their perceptions of the interventions recommended by the team are critical. If the referring teacher is not invested in the intervention, then chances for adequate treatment integrity are diminished (Elliott, 1986; Reimers et al., 1987). CPS-GEI attempts to increase the investment of referring teachers by including them on the team during the referral process (Isaksen, 2000). However, the referring teacher's ratings of

the intervention types were not collected in this study, unless the referring teacher was a permanent member of the GEI team.

The effect of the follow-up support was not evaluated and may have played a role in how effective the teams were in implementing the process. The amount of support a team received may increase the integrity with which the process was implemented. Given that follow-up support has been found to enhance team effectiveness (Bahr et al., 1999; McDougal et al., 2000), future research could assess the impact of follow-up support on process integrity and related variables such as acceptability, familiarity, and perceived effectiveness.

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Table 1
Demographic Information for GEI Team Members

	All Members			Treatment			Control		
	n	%	M	n	%	M	n	%	M
Age	85	100.0	43.85(9.68)	50	58.8	44.00(10.03)	35	41.2	43.63(9.29)
Years Teaching	89	100.0	15.63(9.38)	52	58.4	13.92(8.96)	37	41.6	18.03(9.56)
Years on Team	89	100.0	3.45(2.88)	52	58.4	3.44(2.78)	37	41.6	3.46(3.04)
Title (Total)	89	100.0		52	100.0		37	100.0	
General Education Teacher	39	43.8		22	42.3		17	45.9	
Special Education Teacher	20	22.5		14	26.9		6	16.2	
Administrator	11	12.4		7	13.5		4	10.8	
Other staff	19	21.3		9	17.3		10	27.0	
Ethnicity	79	100.0		47	100.0		32	100.0	
Caucasian	77	97.5		45	95.7		32	100.0	
African American	1	1.3		1	2.1		0	0.0	
Hispanic	1	1.3		1	2.1		0	0.0	
Gender	87	100.0		52	100.0		35	100.0	
Female	81	93.1		50	96.2		31	88.6	
Male	6	6.9		2	3.8		4	11.4	
Education Level	87	100.0		52	100.0		35	100.0	
Bachelors or below[a]	23	26.4		16	30.8		7	20.0	
Masters	39	44.8		26	50.0		13	37.1	
Masters Plus	25	28.7		10	19.2		15	42.9	

Note. Values enclosed in parentheses represent standard deviations.
[a] One participant was a teacher's aide and did not have a Bachelors degree.

Table 2
Factor Loadings for Intervention Types for Familiarity Ratings

Variable	Intervention Type	
	Positive	Negative
Alpha Coefficient	.835[a]	.758
Redirection	.932*	.250
Manipulation of Material Reward	.671*	.590
Alter Classroom Environment	.411	.768*
Time-Out in Classroom	.214	.863*
Removal from Classroom	.316	.790*

[a]This alpha coefficient includes the variable Alter Classroom Environment because conceptually this type of intervention makes sense to be included as a Positive Intervention type, and the factor analyses for the Acceptability and Effectiveness variables suggest that this intervention type fits with the Positive Intervention type.
*significant at a .6 cut off.

Table 3
Factor Loadings for Intervention Types for Acceptability Ratings by Severity Level

Variable	Intervention Type	
	Positive	Negative
Mild		
Alpha Coefficient	.564	.719
Redirection	.653*	-.303
Manipulation of Material Reward	.785*	.208
Alter Classroom Environment	.714*	.359
Time-Out in Classroom	.103	.822*
Removal from Classroom	----	.871*
Moderate		
Alpha Coefficient	.757	.614
Redirection	.769*	.137
Manipulation of Material Reward	.823*	----
Alter Classroom Environment	.803*	.320
Time-Out in Classroom	.304	.764*
Removal from Classroom	----	.885*
Severe		
Alpha Coefficient	.834	.628
Redirection	.868*	----
Manipulation of Material Reward	.816*	.275
Alter Classroom Environment	.795*	.426
Time-Out in Classroom	.347	.750*
Removal from Classroom	.102	.886*

*significant at a .6 cut off.

Table 4
Factor Loadings for Intervention Types for Perceived Effectiveness Ratings by Severity Level

Variable	Intervention Type	
	Positive	Negative
Mild		
Alpha Coefficient	.646	.777
Redirection	.777*	-.123
Manipulation of Material Reward	.791*	.194
Alter Classroom Environment	.682*	.391
Time-Out in Classroom	.177	.848*
Removal from Classroom	----	.919*
Moderate		
Alpha Coefficient	.776	.567
Redirection	.793*	.171
Manipulation of Material Reward	.813*	----
Alter Classroom Environment	.847*	.127
Time-Out in Classroom	.488	.687*
Removal from Classroom	----	.920*
Severe		
Alpha Coefficient	.839	.582
Redirection	.878*	----
Manipulation of Material Reward	.883*	.127
Alter Classroom Environment	.817*	.325
Time-Out in Classroom	.254	.787*
Removal from Classroom	----	.867*

*significant at a .6 cut off.

Table 5

Means and Standard Deviations of Intervention Ratings for Familiarity by Group and Time

Group		Positive			Negative			Consultation		
		M	SD	n	M	SD	n	M	SD	n
Treatment	Pre	4.46	.69	52	4.26	.83	52	4.52	.73	52
	Post	4.80	.36	52	4.60	.66	52	4.79	.54	52
Control	Pre	4.71	.58	37	4.57	.66	37	4.76	.60	37
	Post	4.67	.56	37	4.54	.67	37	4.70	.62	37

Note. Ratings range form 1 (not familiar) to 5 (very familiar).

Table 6

Analyses of Variance for Familiarity by Intervention Type

Source	df	F		
		Positive	Negative	Consultation
Between subjects				
Group (G)	1	.31	.91	.42
S within-group error	87	(.47)	(.76)	(.60)
Within subjects				
Time (T)	1	5.90*	3.93	2.71
T x G	1	10.05**	5.42*	6.12*
T x S within-group error	87	(.16)	(.26)	(.19)

Note. Values enclosed in parentheses represent mean square errors.
*$p < .05$. **$p < .01$.

Table 7

Means and Standard Deviations of Intervention Ratings for Acceptability by Group, Time, and Severity Level

Group		Positive			Negative			Consultation		
		M	SD	n	M	SD	n	M	SD	n
	Mild	4.05	.68	50	3.07	1.22	49	4.13	1.24	52
Pre	Moderate	3.96	.83	50	3.71	.87	49	4.38	.80	52
	Severe	3.77	1.05	50	4.05	.88	49	4.42	.91	52
Treatment										
	Mild	4.39	.68	50	2.98	1.15	49	4.00	1.14	52
Post	Moderate	4.35	.70	50	4.02	.84	49	4.46	.75	52
	Severe	4.05	.90	50	4.22	.78	49	4.52	.85	52
	Mild	4.24	.74	35	2.46	.97	35	3.78	1.15	36
Pre	Moderate	4.13	.73	35	3.66	.98	35	4.25	.91	36
	Severe	3.79	1.09	35	3.97	.96	35	4.31	1.01	36
Control										
	Mild	4.12	.72	35	2.63	1.11	35	3.75	1.11	36
Post	Moderate	3.99	.92	35	3.73	1.12	35	4.22	1.10	36
	Severe	3.55	1.15	35	3.94	1.08	35	4.25	1.11	36

Note. Ratings range form 1 (not acceptable) to 5 (very acceptable).

Table 8

Analyses of Variance for Acceptability by Intervention Type

Source	df	F		
		Positive	Negative	Consultation
Between subjects				
Group (G)	1	.70	3.47	2.37
S within-group error		(2.65)	(2.75)	(2.80)
df error		83[a]	82[a]	86[a]
Within subjects				
Time (T)	1	1.95	1.31	.02
Severity (S)	2	15.73***	56.53***	9.30***
T x G	1	16.83***	.11	.10
S x G	2	.81	1.39	.18
T x S	2	.64	.79	.21
T x S x G	2	.10	1.40	.29
T x S x S within-group error		(.20)	(.39)	(.46)
df error		166[a]	164[a]	172[a]

Note. Values enclosed in parentheses represent mean square errors.
[a]Degrees of freedom error.
***$p < .001$.

Table 9

Means and Standard Deviations of Intervention Ratings for Perceived Effectiveness by Group, Time, and Severity Level

Group		Positive			Negative			Consultation		
		M	SD	n	M	SD	n	M	SD	n
	Mild	3.70	.73	44	2.88	1.11	49	3.57	1.10	49
Pre	Moderate	3.34	.76	44	3.06	.73	49	3.41	.81	49
	Severe	2.64	.91	44	2.87	.75	49	3.10	1.01	49
Treatment										
	Mild	4.11	.67	44	3.04	1.02	49	3.92	.91	49
Post	Moderate	3.55	.74	44	3.33	.79	49	3.86	.87	49
	Severe	2.76	.96	44	3.24	.87	49	3.51	1.12	49
	Mild	3.92	.78	35	2.66	1.07	34	3.38	.95	37
Pre	Moderate	3.27	.83	35	3.32	.94	34	3.51	.96	37
	Severe	2.32	.89	35	3.19	1.03	34	3.24	1.04	37
Control										
	Mild	3.98	.73	35	2.74	1.06	34	3.38	.98	37
Post	Moderate	3.44	.68	35	3.37	.82	34	3.43	.83	37
	Severe	2.54	.86	35	3.21	.84	34	3.30	.91	37

Note. Ratings range form 1 (not effective) to 5 (very effective).

Table 10

Analyses of Variance for Perceived Effectiveness by Intervention Type

Source	df	F		
		Positive	Negative	Consultation
Between subjects				
Group (G)	1	.39	.93	1.77
S within-group error		(1.71)	(1.73)	(2.50)
df error		77[a]	81[a]	84[a]
Within subjects				
Time (T)	1	7.34**	3.19	6.18*
Severity (S)	2	97.44***	14.35***	7.10**
T x G	1	.45	1.64	6.76**
S x G	2	1.22	2.45	1.19
T x S	2	.18	.13	.10
T x S x G	2	1.98	.39	.42
T x S x S within-group error		(.25)	(.43)	(.50)
df error		154[a]	162[a]	168[a]

Note. Values enclosed in parentheses represent mean square errors.
[a]Degrees of freedom error.
*p < .05. **p < .01. ***p < .001.

APPENDIXES

APPENDIX A

Please answer the following questions about yourself and your GEI Team. Remember your responses are confidential.

Title _____

Ethnicity _____

Age _____

Gender _____

Degree (i.e., Bachelors, Masters, Master plus 30) _____

Years teaching _____

Years on GEI team _____

Name of your team (i.e., SAT, TAT, or GEI) _____

Purpose of team (please be brief)

_____

_____

_____

How often did your team meet? _____

Average length of meeting time? _____

How many follow-up contacts did your team have with your CPS-GEI coach from the training day?[a] _____

What type of contact (i.e., came to GEI meeting twice, answered question over phone once)?[a] _____

_____

_____

How long did it take you to complete this survey? _____

[a] = These questions were deleted from the surveys given to the control schools.

Title (i.e., math teacher)_____ **Years teaching experience**_____ **Years on GEI team**_____

Please indicate your familiarity with the following types of interventions by circling the best response below.

Type of Intervention	**My familiarity with this intervention is best described as:** **(please circle only one)**
Redirection (i.e., model desired behavior; signal student using gesture; move closer to student; verbal praise; verbal cue, prompt or redirect; call attention to rules; verbal social skills instruction; verbal recognition of negative feelings; praise *another* for desired behavior)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar
Manipulation of Material Reward (i.e., verbally promise reward; develop contract for reward; take away material reinforcement, reinforce student with a material reward; or reinforce *another* student with a material reward)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar
Alter Classroom Physical Environment (i.e., change physical environment of room; change curriculum; and change student's seat in room)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar
Consultation (i.e., consult with special education teacher, another classroom teacher, school psychologist, school social worker, or special education director)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar
Time-Out in Classroom (i.e., time out in present location or in a special area in room)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar
Removal from Classroom (i.e., consult with guidance counselor; send student to place of detention; refer to in-school suspension; time-out in isolated room)	1 Not Familiar 2 3 Familiar 4 5 Very Familiar

Please rate the following interventions for a child with a *Mild Problem*. This type of problem can *usually* be addressed by the teacher. It is mostly causing problems for only that child or may be mildly disruptive to the class. Some examples are, but not limited to, passive off task behavior (i.e., daydreaming) or occasional verbal tantrums.

Type of Intervention	I judge the acceptability of this intervention for a child with a *Mild Problem* to be: (please circle only one)	How effective is this type of intervention likely to be for a child with a *Mild Problem*? (please circle only one)
Redirection (i.e., model desired behavior; signal student using gesture; move closer to student; verbal praise; verbal cue, prompt or redirect; call attention to rules; verbal social skills instruction; verbal recognition of negative feelings; praise *another* for desired behavior)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Manipulation of Material Reward (i.e., verbally promise reward; develop contract for reward; take away material reinforcement, reinforce student with a material reward; or reinforce *another* student with a material reward)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Alter Classroom Physical Environment (i.e., change physical environment of room; change curriculum; and change student's seat in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Consultation (i.e., consult with special education teacher, another classroom teacher, school psychologist, school social worker, or special education director)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Time-Out in Classroom (i.e., time out in present location or in a special area in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Removal from Classroom (i.e., consult with guidance counselor; send student to place of detention; refer to in-school suspension; time-out in isolated room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective

Please rate the following interventions for a child with a *Moderate Problem*. This type of problem may *frequently* be disruptive to the class (i.e., frequent use of obscene language, arguing with peers, light shoving or pushing of others) or has moderate academic difficulties (i.e., failing less than half of classes due to inability or refusal to complete work).

Type of Intervention	I judge the acceptability of this intervention for a child with a *Moderate*[a] *Problem* to be: (please circle only one)	How effective is this type of intervention likely to be for a child with a *Moderate*[a] *Problem*? (please circle only one)
Redirection (i.e., model desired behavior; signal student using gesture; move closer to student; verbal praise; verbal cue, prompt or redirect; call attention to rules; verbal social skills instruction; verbal recognition of negative feelings; praise *another* for desired behavior)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Manipulation of Material Reward (i.e., verbally promise reward; develop contract for reward; take away material reinforcement, reinforce student with a material reward; or reinforce *another* student with a material reward)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Alter Classroom Physical Environment (i.e., change physical environment of room; change curriculum; and change student's seat in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Consultation (i.e., consult with special education teacher, another classroom teacher, school psychologist, school social worker, or special education director)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Time-Out in Classroom (i.e., time out in present location or in a special area in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Removal from Classroom (i.e., consult with guidance counselor; send student to place of detention; refer to in-school suspension; time-out in isolated room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective

[a] = Pretest surveys completed by the treatment schools contained a typographical error where "mild" was substituted for "moderate."

Please rate the following interventions for a child with a *Severe Problem*. This type of problem is highly disruptive to the class (i.e., constantly out of seat; continually talks or plays with others during work time; forcefully strikes others; destroys property) or significant academic problems (i.e., failing half of classes due to either inability or refusal to complete work).

Type of Intervention	I judge the acceptability of this intervention for a child with a *Severe*[a] *Problem* to be: (please circle only one)	How effective is this type of intervention likely to be for a child with a *Severe*[a] *Problem*? (please circle only one)
Redirection (i.e., model desired behavior; signal student using gesture; move closer to student; verbal praise; verbal cue, prompt or redirect; call attention to rules; verbal social skills instruction; verbal recognition of negative feelings; praise *another* for desired behavior)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Manipulation of Material Reward (i.e., verbally promise reward; develop contract for reward; take away material reinforcement, reinforce student with a material reward; or reinforce *another* student with a material reward)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Alter Classroom Physical Environment (i.e., change physical environment of room; change curriculum; and change student's seat in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Consultation (i.e., consult with special education teacher, another classroom teacher, school psychologist, school social worker, or special education director)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Time-Out in Classroom (i.e., time out in present location or in a special area in room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective
Removal from Classroom (i.e., consult with guidance counselor; send student to place of detention; refer to in-school suspension; time-out in isolated room)	1 Not Acceptable 2 3 Acceptable 4 5 Very Acceptable	1 Not Effective 2 3 Effective 4 5 Very Effective

[a] = Pretest surveys completed by the treatment schools contained a typographical error where "mild" was substituted for "severe."

APPENDIX C

Dear GEI Team Member,

As you receive this letter we are only a week or two away from the Blumberg Center's CPS-GEI training! Enclosed is a parking tag you will need for the day of training. I have also enclosed a survey which you are asked to complete prior to the training. Please bring the completed survey to the training. If you are unable to attend the training, please send your survey with another team member.

This survey is intended to measure familiarity, effectiveness, acceptability and use of several types of interventions. The survey is designed to be user friendly, and it requires you to circle a response to most of the items. The information you are providing will be valuable in developing practices that will enhance how GEI teams function, as GEI teams using the Creative Problem Solving (CPS) is a new and innovative area.

Acceptability refers to judgments about the treatment procedures including whether treatment is appropriate for the problem, whether it is fair, reasonable, or intrusive, and whether treatment meets with conventional notions of what treatment should be. Effectiveness concerns a constructive difference in performance as perceived by the referring teacher and GEI team. You will be asked to judge the acceptability and effectiveness of different interventions, some of which you may not have ever used. Please do your best to rate *all* items with what you think would be the best response.

To ensure confidentiality, your survey will be individually coded so that your responses will be anonymous. Please be aware that a survey can be omitted from the response pool up to the time the surveys are coded in our database. When findings are disseminated, only group results will be reported.

Thank you in advance for completing this survey. Brief directions are provided at the top of each page. If you have any questions regarding this survey, please do not hesitate to contact me at (812)-234-7379.

Best wishes during this autumn season.

Sincerely,

Jennifer Grimes, M.Ed.

FIGURE C1. Pretest cover letter for the treatment group.

Dear GEI Team Member,

This survey is intended to measure familiarity, effectiveness, acceptability and use of several types of interventions. The survey is designed to be user friendly, and it requires you to circle a response to most of the items. The information you are providing will be valuable in developing practices that will enhance how GEI teams function.

Acceptability refers to judgments about the treatment procedures including whether treatment is appropriate for the problem, whether it is fair, reasonable, or intrusive, and whether treatment meets with conventional notions of what treatment should be. Effectiveness concerns a constructive difference in performance as perceived by the referring teacher and GEI team. You will be asked to judge the acceptability and effectiveness of different interventions, some of which you may not have ever used. Please do your best to rate *all* items with what you think would be the best response.

To ensure confidentiality, your survey will be individually coded so that your responses will be anonymous. I ask that you ***please print your name and school name on the top of this cover letter***. After your survey is assigned a participant code, the cover letter will be removed. Please be aware that a survey can be omitted from the response pool up to the time the surveys are coded in our database. When findings are disseminated, only group results will be reported.

Thank you in advance for completing this survey. Brief directions are provided at the top of each page. After you have completed the survey, please return it in the envelope provided. If you have any questions regarding this survey, please do not hesitate to contact me at (812)-234-7379.

Best wishes during this autumn season.

Sincerely,

Jennifer Grimes, M.Ed.

FIGURE C2. Pretest cover letter for the control group.

Dear GEI Team Member,

As you receive this letter we are only a few weeks from the Blumberg Center end of the year CPS-GEI meeting! I have also enclosed a survey which you are asked to complete prior to that day. Please bring the completed survey to the meeting. If you are unable to attend, please send your survey with another team member.

This survey is intended to measure familiarity, effectiveness, acceptability and use of several types of interventions. The survey is designed to be user friendly, and it requires you to circle a response to most of the items. The information you are providing will be valuable in developing practices that will enhance how GEI teams function, as GEI teams using the Creative Problem Solving (CPS) is a new and innovative area.

Acceptability refers to judgments about the treatment procedures including whether treatment is appropriate for the problem, whether it is fair, reasonable, or intrusive, and whether treatment meets with conventional notions of what treatment should be. Effectiveness concerns a constructive difference in performance as perceived by the referring teacher and GEI team. You will be asked to judge the acceptability and effectiveness of different interventions, some of which you may not have ever used. Please do your best to rate *all* items with what you think would be the best response.

To ensure confidentiality, your survey will be individually coded so that your responses will be anonymous. I ask that you ***please print your name and school name on the top of this cover letter.*** After your survey is assigned a participant code, the cover letter will be removed. Please be aware that a survey can be omitted from the response pool up to the time the surveys are coded in our database. When findings are disseminated, only group results will be reported.

Thank you in advance for completing this survey. Brief directions are provided at the top of each page. If you have any questions regarding this survey, please do not hesitate to contact me at (812)-234-7379.

Best wishes during this spring season.

Sincerely,

Jennifer Grimes, M.Ed.

FIGURE C3. Posttest cover letter for the treatment group.

Dear GEI Team Member,

This survey is intended to measure familiarity, effectiveness, acceptability and use of several types of interventions. The survey is designed to be user friendly, and it requires you to circle a response to most of the items. The information you are providing will be valuable in developing practices that will enhance how GEI teams function.

Acceptability refers to judgments about the treatment procedures including whether treatment is appropriate for the problem, whether it is fair, reasonable, or intrusive, and whether treatment meets with conventional notions of what treatment should be. Effectiveness concerns a constructive difference in performance as perceived by the referring teacher and GEI team. You will be asked to judge the acceptability and effectiveness of different interventions, some of which you may not have ever used. Please do your best to rate *all* items with what you think would be the best response.

To ensure confidentiality, your survey will be individually coded so that your responses will be anonymous. I ask that you ***please print your name and school name on the top of this cover letter***. After your survey is assigned a participant code, the cover letter will be removed. Please be aware that a survey can be omitted from the response pool up to the time the surveys are coded in our database. When findings are disseminated, only group results will be reported.

Thank you in advance for completing this survey! Brief directions are provided at the top of each page. Please complete this survey prior to April 28th. A Blumberg Center GEI-CPS Coordinator will be visiting your school at the end of April and will collect the surveys from you school GEI Coordinator. If you have any questions regarding this survey, please do not hesitate to contact me at (812)-234-7379.

Best wishes during this spring season.

Sincerely,

Jennifer Grimes, M.Ed.

FIGURE C4. Posttest cover letter for the control group.